

## FROM AN OBSERVATORY

It will be some time yet before the rising of the moon. Looking down from the observatory one can see the pathways across the park dotted out in yellow lamps, each with a fringe of dim green; and further off, hot and bright, is the tracery of the illuminated streets, through which the people go to and fro. Save for an occasional stirring, or a passing voice speaking out of the dimness beneath me, the night is very still. Not a cloud is to be seen in the dark midwinter sky to hide one speck of its broad smears of star dust and its shining constellations.

As the moon rises, heaven will be flooded with blue light, and one after another the stars will be submerged and lost, until only a solitary shining pinnacle of brightness will here and there remain out of the whole host of them. It is curious to think that, were the moon but a little brighter and truly the ruler of the night, rising to its empire with the setting of the sun, we should never dream of the great stellar universe in which our little solar system swims--or know it only as a traveller's tale, a strange thing to be seen at times in the Arctic Circle. Nay, if the earth's atmosphere were some few score miles higher, a night-long twilight would be drawn like an impenetrable veil across the stars. By a mere accident of our existence we see their multitude ever and again, when the curtains of the daylight and moonlight, and of our own narrow pressing necessities, are for a little while drawn back. Then, for an interval, we look, as if out of a window, into the great

deep of heaven. So far as physical science goes, there is nothing in the essential conditions of our existence to necessitate that we should have these transitory glimpses of infinite space. We can imagine men just like ourselves without such an outlook. But it happens that we have it.

If we had not this vision, if we had always so much light in the sky that we could not perceive the stars, our lives, so far as we can infer, would be very much as they are now; there would still be the same needs and desires, the same appliances for our safety and satisfaction; this little gaslit world below would scarcely miss the stars now, if they were blotted out for ever. But our science would be different in some respects had we never seen them. We should still have good reason, in Foucault's pendulum experiment, for supposing that the world rotated upon its axis, and that the sun was so far relatively fixed; but we should have no suspicion of the orbital revolution of the world. Instead we should ascribe the seasonal differences to a meridional movement of the sun. Our spectroscopic astronomy--so far as it refers to the composition of the sun and moon--would stand precisely where it does, but the bulk of our mathematical astronomy would not exist. Our calendar would still be in all essential respects as it is now; our year with the solstices and equinoxes as its cardinal points. The texture of our poetry might conceivably be the poorer without its star spangles; our philosophy, for the want of a nebular hypothesis. These would be the main differences. Yet, to those who indulge in speculative dreaming, how much smaller life would be with a sun and a moon and a blue beyond for the only visible, the only thinkable universe. And it is, we repeat,

from the scientific standpoint a mere accident that the present--the daylight--world periodically opens, as it were, and gives us this inspiring glimpse of the remoteness of space.

One may imagine countless meteors and comets streaming through the solar system, unobserved by those who dwelt under such conditions as have just been suggested, or some huge dark body from the outer depths sweeping straight at that little visible universe, and all unsuspected by the inhabitants. One may imagine the scientific people of such a world, calm in their assurance of the permanence of things, incapable almost of conceiving any disturbing cause. One may imagine how an imaginative writer who doubted that permanence would be pooh-poohed. "Cannot we see to the uttermost limits of space?" they might argue, "and is it not altogether blue and void?" Then, as the unseen visitor draws near, begin the most extraordinary perturbations. The two known heavenly bodies suddenly fail from their accustomed routine. The moon, hitherto invariably full, changes towards its last quarter--and then, behold! for the first time the rays of the greater stars visibly pierce the blue canopy of the sky. How suddenly--painfully almost--the minds of thinking men would be enlarged when this rash of the stars appeared.

And what then if our heavens were to open? Very thin indeed is the curtain between us and the unknown. There is a fear of the night that is begotten of ignorance and superstition, a nightmare fear, the fear of the impossible; and there is another fear of the night--of the starlit night--that comes with knowledge, when we see in its true proportion

this little life of ours with all its phantasmal environment of cities and stores and arsenals, and the habits, prejudices, and promises of men. Down there in the gaslit street such things are real and solid enough, the only real things, perhaps; but not up here, not under the midnight sky. Here for a space, standing silently upon the dim, grey tower of the old observatory, we may clear our minds of instincts and illusions, and look out upon the real.

And now to the eastward the stars are no longer innumerable, and the sky grows wan. Then a faint silvery mist appears above the housetops, and at last in the midst of this there comes a brilliantly shining line--the upper edge of the rising moon.